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- GAVAZZI, GIUSEPPE. 21 Centimeter Study of Spiral Galaxies in the Coma Supercluster. *Giuseppe Gavazzi.* **320**, 96, 109-B3 (1987)
- GEHALLE, T. R. The Broad-Line Region at the Center of the Galaxy. *T. R. Geballe, R. Wade, K. Krisciunas, I. Gatley, and M. C. Bird.* **320**, 562, 115-F12 (1987)
- Ionization State in and Reddening to the Center of the Galaxy. *R. Wade, T. R. Geballe, K. Krisciunas, I. Gatley, and M. C. Bird.* **320**, 570, 115-G7 (1987)
- Molecular Hydrogen Line Emission in Seyfert Galactic Nuclei. *J. Fischer, T. R. Geballe, Howard A. Smith, M. Simon, and J. W. V. Storey.* **320**, 667, 117-B2 (1987)
- GEHRELS, NEIL. Prospects for Observations of Nucleosynthetic Gamma-Ray Lines and Continuum from SN 1987A. *Neil Gehrels, Crawford J. MacCallum, and Marvin Leventhal.* **320**, L19, 114-B10 (1987)
- GENZEL, R. Far-Infrared Measurements of N/O in H II Regions: Evidence for Enhanced CN Process Nucleosynthesis in the Inner Galaxy. *D. F. Lester, H. L. Dinerstein, M. W. Werner, D. M. Watson, R. Genzel, and J. W. V. Storey.* **320**, 573, 116-A1 (1987)
- GILDEN, D. Reconnection-driven Oscillations in Dwarf Novae Disks. *T. Tajima and D. Gilden.* **320**, 741, 117-G10 (1987)
- GIOVANELLI, RICCARDO. The Structure and Evolution of Hoag's Object. *François Schweizer, W. Kent Ford, Jr., Robert Jedrzejewski, and Riccardo Giovanelli.* **320**, 454, 114-D3 (1987)
- GOMEZ, A. IRAS 18059 - 3211: Optically Known As Gomez's Hamburger: Erratum. *M. T. Ruiz, V. Blanco, J. Maza, S. Heathcote, A. Phillips, K. Kawara, C. Anguita, M. Hamuy, and A. Gomez.* **320**, L157, 121-F14 (1987) (Orig. paper in **316**, L21, 56-B10)
- GRADY, C. A. Highly Ionized Stellar Winds in Be Stars: The Evidence for Aspect Dependence. *C. A. Grady, K. S. Bjorkman, and T. P. Snow.* **320**, 376, 112-B8 (1987)
- GREEN, RICHARD F. The Rotationally Modulated Zeeman Spectrum at Nearly 10^9 Gauss of the White Dwarf PG 1031 + 234. *William B. Latter, Gary D. Schmidt, and Richard F. Green.* **320**, 308, 111-D9 (1987)
- GREGORY, B. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. *V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews.* **320**, 589, 116-B3 (1987)
- GRINDLAY, JONATHAN E. CCD Photometry of Globular Cluster Core Structure. I. NGC 6388, NGC 6624, and M15—One Flat Core and Two Cusps. *Phyllis M. Lugger, Haldan Cohn, Jonathan E. Grindlay, Charles D. Bailyn, and Paul Hertz.* **320**, 482, 114-F8 (1987)
- GRINSTEIN, BENJAMIN. On the Validity of the Zel'dovich Approximation. *Benjamin Grinstein and Mark B. Wise.* **320**, 448, 114-C11 (1987)
- GROSSMAN, E. N. A Possible Protostar near HH 7-11. *E. N. Grossman, C. R. Masson, A. I. Sargent, N. Z. Scoville, S. Scott, and D. P. Woody.* **320**, 356, 112-A1 (1987)
- GRUBER, D. E. HEAO 1 Hard X-Ray Observations of Three Abell Clusters of Galaxies. *Y. Kephali, D. E. Gruber, and R. E. Rothschild.* **320**, 139, 109-E5 (1987)
- GULL, THEODORE R. Physical Parameters for 12 Planetary Nebulae and Their Central Stars in the Magellanic Clouds. *Lawrence H. Aller, Charles D. Keyes, Stephen P. Maran, Theodore R. Gull, Andrew G. Michalitsianos, and Theodore P. Stecher.* **320**, 159, 109-F12 (1987)
- GUSTAFSSON, B. Spectroscopy of the Rapidly Rotating K Star HD 36705. *O. Vilhu, B. Gustafsson, and B. Edvardsson.* **320**, 850, 119-B5 (1987)
- HALLIDAY, I. Evidence from Meteor Patrol Photographs for a Nonastrophysical Origin of the Reported Optical Flashes in Perseus. *I. Halliday, P. A. Feldman, and A. T. Blackwell.* **320**, L153, 121-F11 (1987)
- HAMUY, M. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. *V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews.* **320**, 589, 116-B3 (1987)
- IRAS 18059 - 3211: Optically Known As Gomez's Hamburger: Erratum. *M. T. Ruiz, V. Blanco, J. Maza, S. Heathcote, A. Phillips, K. Kawara, C. Anguita, M. Hamuy, and A. Gomez.* **320**, L157, 121-F14 (1987) (Orig. paper in **316**, L21, 56-B10)
- HARRIS, C. J. The Solar Boron Abundance. *R. C. M. Learner and C. J. Harris.* **320**, 926, 120-A3 (1987)
- HARTMANN, LEE W. Rotational Velocities of Low-Mass Stars in the Hyades. *John R. Stauffer, Lee W. Hartmann, and David W. Latham.* **320**, L51, 114-D12 (1987)
- HARTWICK, F. D. A. Kinematics and Age of the Low-Mass X-Ray Binaries. *A. P. Cowley, J. B. Hutchings, David Crampton, and F. D. A. Hartwick.* **320**, 296, 111-C11 (1987)
- A Search for Primeval Galaxies Using a Narrow-Band Imaging Technique. *C. J. Pritchett and F. D. A. Hartwick.* **320**, 464, 114-E2 (1987)
- HASCHICK, A. D. The Leo Triplet Spiral Galaxy NGC 3628. II. VLA Observations of the Hydroxyl Absorption. *J. T. Schmelz, W. A. Baan, and A. D. Haschick.* **320**, 145, 109-E11 (1987)
- HASCHICK, AUBREY D. Zw 15107 + 0724 and the Family of OH Megamasers. *Willem A. Baan, Christian Henkel, and Aubrey D. Haschick.* **320**, 154, 109-F6 (1987)
- HEATHCOTE, S. IRAS 18059 - 3211: Optically Known As Gomez's Hamburger: Erratum. *M. T. Ruiz, V. Blanco, J. Maza, S. Heathcote, A. Phillips, K. Kawara, C. Anguita, M. Hamuy, and A. Gomez.* **320**, L157, 121-F14 (1987) (Orig. paper in **316**, L21, 56-B10)
- HEATHCOTE, S. R. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. *V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews.* **320**, 589, 116-B3 (1987)
- HEINBACH, U. Antiproton Production of Propagating Cosmic Rays under Distributed Reacceleration. *Manfred Simon, U. Heinbach, and Ch. Koch.* **320**, 699, 117-D6 (1987)
- HENKEL, CHRISTIAN. Zw 15107 + 0724 and the Family of OH Megamasers. *Willem A. Baan, Christian Henkel, and Aubrey D. Haschick.* **320**, 154, 109-F6 (1987)
- H₂O Maser Emission from the Nuclei of NGC 253 and M51. *Paul T. P. Ho, Robert N. Martin, Christian Henkel, and Jean L. Turner.* **320**, 663, 117-A12 (1987)
- HENNING, PATRICIA A. Searching at 21 Centimeters for Galaxies behind the Milky Way. *Frank J. Kerr and Patricia A. Henning.* **320**, L99,

- 121-C2 (1987)
- HERTZ, PAUL. CCD Photometry of Globular Cluster Core Structure. I. NGC 6388, NGC 6624, and M15—One Flat Core and Two Cusps. *Phyllis M. Lugger, Haldan Cohn, Jonathan E. Grindlay, Charles D. Bailyn, and Paul Hertz*. **320**, 482, 114-F8 (1987)
- HILL, ROBERT S. Vacuum Ultraviolet Images of the Large Magellanic Cloud. *Andrew M. Smith, Robert M. Cornett, and Robert S. Hill*. **320**, 609, 116-C9 (1987)
- HINSHAW, GARY. Gravitational Lensing by Isothermal Spheres with Finite Core Radii: Galaxies and Dark Matter. *Gary Hinshaw and Lawrence M. Krauss*. **320**, 468, 114-E7 (1987)
- HO, PAUL T. P. H₂O Maser Emission from the Nuclei of NGC 253 and M51. *Paul T. P. Ho, Robert N. Martin, Christian Henkel, and Jean L. Turner*. **320**, 663, 117-A12 (1987)
- HODGE, PAUL. CCD Photometry of Large Magellanic Cloud Clusters. IV. The Metal-rich, Remote Southern Cluster LW 79. *Mario Mateo and Paul Hodge*. **320**, 626, 116-D14 (1987)
- HOLLWEG, JOSEPH V. Resonance Absorption of Magnetohydrodynamic Surface Waves: Viscous Effects. *Joseph V. Hollweg*. **320**, 875, 119-D2 (1987)
- HONG, S. S. Inversion of the Zodiacal Infrared Brightness Integral. *S. S. Hong and J. K. Um*. **320**, 928, 120-A5 (1987)
- HOWELL, R. R. Milliarcsecond Resolution Infrared Observations of Young Stars in Taurus and Ophiuchus. *M. Simon, R. R. Howell, A. J. Longmore, B. A. Wilking, D. M. Peterson, and W.-P. Chen*. **320**, 344, 111-G3 (1987)
- HUBBARD, E. N. The Velocity Distribution of Quasar/AGN Broad Emission Line Clouds. *R. C. Puettner and E. N. Hubbard*. **320**, 85, 109-A6 (1987)
- HUEBNER, W. F. Polyoxymethylene in Comet Halley. *W. F. Huebner, D. C. Boice, and C. M. Sharp*. **320**, L149, 121-F7 (1987)
- HURLEY, K. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. *J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig*. **320**, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. *J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov*. **320**, L111, 121-C13 (1987)
- HUTCHINGS, J. B. What Is the Difference between Radio Galaxies and Radio Quasar Galaxies? *J. B. Hutchings*. **320**, 122, 109-D1 (1987)
- KINEMATICS AND AGE OF THE LOW-MASS X-RAY BINARIES. *A. P. Cowley, J. B. Hutchings, David Crampton, and F. D. A. Hartwick*. **320**, 296, 111-C11 (1987)
- IMAMURA, JAMES N. Rapid Optical Flaring in MXB 1735 - 444 and an Optical Burst from GX 17 + 2. *James N. Imamura, Thomas Y. Steiman-Cameron, and John Middledeitch*. **320**, L41, 114-D3 (1987)
- JAKOBSEN, PETER. $z_{\text{abs}} \approx z_{\text{em}}$ Absorption Systems in Quasar Spectra: A Correlation with Radio and Optical Luminosity? *Palle Møller and Peter Jakobsen*. **320**, L75, 121-A9 (1987)
- JEDRZEJEWSKI, ROBERT. The Structure and Evolution of Hoag's Object. *François Schweizer, W. Kent Ford, Jr., Robert Jedrzejewski, and Riccardo Giovanelli*. **320**, 454, 114-D3 (1987)
- JONES, T. W. A Nonthermal Model for the XUV, Soft X-Ray Emission of AGN and QSOs. *T. W. Jones and W. A. Stein*. **320**, L1, 114-A4 (1987)
- JUGAKU, JUN. The Abundance of Gallium in B-Type Chemically Peculiar Stars: Addendum. *Masahide Takada-Hidai, Kozo Sadakane, and Jun Jugaku*. **320**, 437, 112-G4 (1987) (Orig. paper in **304**, 425, 58-D14)
- KAHANA, S. Collapse of 9 M_{\odot} Stars. *E. Baron, J. Cooperstein, and S. Kahana*. **320**, 300, 111-D1 (1987)
- Collapsing White Dwarfs. *E. Baron, J. Cooperstein, S. Kahana, and K. Nomoto*. **320**, 304, 111-D5 (1987)
- KALLMAN, TIMOTHY R. Fe K Features as Probes of the Nuclear Reflection Region in Seyfert Galaxies. *Julian H. Krolik and Timothy R. Kallman*. **320**, L5, 114-A8 (1987)
- KANE, S. R. A New Type of Repetitive Behavior in a High-Energy Transient. *J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov*. **320**, L111, 121-C13 (1987)
- KAROVSKA, M. Detection of a Very Bright Source Close to the LMC Supernova SN 1987A. *P. Nisenson, C. Papaliolios, M. Karovska, and R. Noyes*. **320**, L15, 114-B4 (1987)
- KARPEN, JUDITH T. Nonlocal Thermal Transport in Solar Flares. *Judith T. Karpen and C. Richard DeVore*. **320**, 904, 119-F3 (1987)
- KAWARA, K. IRAS 18059 - 3211: Optically Known As Gomez's Hamburger? Erratum. *M. T. Ruiz, V. Blanco, J. Maza, S. Heathcote, A. Phillips, K. Kawara, C. Anguita, M. Hamuy, and A. Gomez*. **320**, L157, 121-F14 (1987) (Orig. paper in **316**, L21, 56-B10)
- KENYON, SCOTT J. The Spectral Evolution of Dwarf Nova Outbursts. *John K. Cannizzo and Scott J. Kenyon*. **320**, 319, 111-E6 (1987)
- KERR, FRANK J. Searching at 21 Centimeters for Galaxies behind the Milky Way. *Frank J. Kerr and Patricia A. Henning*. **320**, L99, 121-C2 (1987)
- KEYES, CHARLES D. Physical Parameters for 12 Planetary Nebulae and Their Central Stars in the Magellanic Clouds. *Lawrence H. Aller, Charles D. Keyes, Stephen P. Maran, Theodore R. Gull, Andrew G. Michalitsianos, and Theodore P. Stecher*. **320**, 159, 109-F12 (1987)
- KIRK, JOHN G. Electron Injection by Relativistic Protons in Active Galactic Nuclei. *Marek Sikora, John G. Kirk, Mitchell C. Begelman, and Peter Schneider*. **320**, L81, 121-B1 (1987)
- KIRSHNER, R. P. The Interstellar Medium toward Supernova 1987A. *A. K. Dupree, R. P. Kirshner, G. E. Nassiopoulou, J. C. Raymond, and G. Sonneborn*. **320**, 597, 116-B11 (1987)
- KIRSHNER, ROBERT P. Ultraviolet Observations of SN 1987A. *Robert P. Kirshner, George Sonneborn, D. Michael Crenshaw, and George E. Nassiopoulou*. **320**, 602, 116-C2 (1987)
- KLEBESADEL, R. W. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. *J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig*. **320**, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. *J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov*. **320**, L111, 121-C13 (1987)
- KLIMCHUK, J. A. A Numerical Study of the Nonlinear Thermal Stability of Solar Loops. *J. A. Klimchuk, S. K. Antocios, and J. T. Mariska*. **320**, 409, 112-D13 (1987)
- KOCH, CH. Antiproton Production of Propagating Cosmic Rays under Distributed Reacceleration. *Manfred Simon, U. Heinbach, and Ch. Koch*. **320**, 699, 117-D6 (1987)
- KOCHANKEK, CHRISTOPHER S. How Big Are Supermassive Black Holes Formed from the Collapse of Dense Star Clusters? *Christopher S. Kochanek, Stuart L. Shapiro, and Saul A. Teukolsky*. **320**, 73, 108-G8 (1987)
- KÖNIGL, ARIEH. Magnetic Braking in Weakly Ionized Media. *Arieh Königl*. **320**, 726, 117-F6 (1987)
- KOUVELIOTOU, C. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. *J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig*. **320**, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. *J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov*. **320**, L111, 121-C13 (1987)
- KOVÁCS, GÉZA. Period Doubling Bifurcations and Chaos in W Virginis Models. *J. Robert Buchler and Géza Kovács*. **320**, L57, 114-E3 (1987)
- KRAUSS, LAWRENCE M. Gravitational Lensing by Isothermal Spheres with Finite Core Radii: Galaxies and Dark Matter. *Gary Hinshaw and Lawrence M. Krauss*. **320**, 468, 114-E7 (1987)
- KRISCIUNAS, K. The Broad-Line Region at the Center of the Galaxy. *T. R. Geballe, R. Wade, K. Krisciunas, I. Gatley, and M. C. Bird*. **320**, 562, 115-F12 (1987)
- Ionization State in and Reddening to the Center of the Galaxy. *R. Wade, T. R. Geballe, K. Krisciunas, I. Gatley, and M. C. Bird*. **320**, 570, 115-G7 (1987)
- KRISHER, TIMOTHY P. 4U 1820 - 30 as a Potential Test of the Nonsymmetric Gravitational Theory of Moffat. *Timothy P. Krisher*. **320**, L47, 114-D8 (1987)
- KROLIK, JULIAN H. Fe K Features as Probes of the Nuclear Reflection Region in Seyfert Galaxies. *Julian H. Krolik and Timothy R. Kallman*. **320**, L5, 114-A8 (1987)
- KUECHLER, G. Radiative Transitions in ^{27}Al and Their Relevance to the $^{26}\text{Al}(p,\gamma)^{27}\text{Si}$ Reaction under Stellar Conditions. *C. Rangacharyulu, G. Kuechler, A. Richter, and E. Spamer*. **320**, 405, 112-D9 (1987)
- KUZNETSOV, A. V. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. *J.-L. Atteia,*

- M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig. *320*, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov. *320*, L111, 121-C13 (1987)
- KWOK, SUN. CO Observations of IRAS Sources with 11.3 Micron Silicon Carbide Dust Features. D. A. Leahy, Sun Kwok, and R. A. Arquilla. *320*, 825, 118-F13 (1987)
- LACHIEZE-REY, MARC. Void Probabilities in the Galaxy Distribution: Scaling and Luminosity Segregation. *Sophie Maurogordato and Marc Lachieze-Rey. 320*, 13, 108-B5 (1987)
- LAMBERT, DAVID L. Neutron-Exposure Variations in MS and S Stars, and the Implications for s-Process Nucleosynthesis. Verne V. Smith, David L. Lambert, and Andrew McWilliam. *320*, 862, 119-C3 (1987)
- Further Observations of the He I 10830 Å Chromospheric Line in Stars (Abstract of Paper in 1987 October Suppl.). David L. Lambert. *320*, 936, 120-B1 (1987)
- LAROS, J. G. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig. *320*, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov. *320*, L111, 121-C13 (1987)
- LASKER, BARRY M. On the Distribution of Colors for Stars in the Ninth to Fifteenth Magnitude Range: Statistics and Implications for Galactic Structure. Barry M. Lasker, Peter M. Garnavich, and Anne P. Reynolds. *320*, 502, 115-A3 (1987)
- LATHAM, DAVID W. Rotational Velocities of Low-Mass Stars in the Hyades. John R. Stauffer, Lee W. Hartmann, and David W. Latham. *320*, L51, 114-D12 (1987)
- LATTER, WILLIAM B. The Rotationally Modulated Zeeman Spectrum at Nearly 10^9 Gauss of the White Dwarf PG 1031 + 234. William B. Latter, Gary D. Schmidt, and Richard F. Green. *320*, 308, 111-D9 (1987)
- LEAHY, D. A. CO Observations of IRAS Sources with 11.3 Micron Silicon Carbide Dust Features. D. A. Leahy, Sun Kwok, and R. A. Arquilla. *320*, 825, 118-F13 (1987)
- LEARNER, R. C. M. The Solar Boron Abundance. R. C. M. Learner and C. J. Harris. *320*, 926, 120-A3 (1987)
- LEPP, S. Cosmic-Ray-induced Photodestruction of Interstellar Molecules in Dense Clouds. A. Sternberg, A. Dalgarno, and S. Lepp. *320*, 676, 117-B11 (1987)
- LESTER, D. F. Far-Infrared Measurements of N/O in H II Regions: Evidence for Enhanced CN Process Nucleosynthesis in the Inner Galaxy. D. F. Lester, H. L. Dinerstein, M. W. Werner, D. M. Watson, R. Genzel, and J. W. V. Storey. *320*, 573, 116-A1 (1987)
- LEVENTHAL, MARVIN. Prospects for Observations of Nucleosynthetic Gamma-Ray Lines and Continuum from SN 1987A. Neil Gehrels, Crawford J. MacCallum, and Marvin Leventhal. *320*, L19, 114-B10 (1987)
- LEVISON, HAROLD F. Observable Properties of E0 Triaxial Galaxies: A Test for Triaxiality. Harold F. Levison. *320*, L93, 121-B11 (1987)
- LEVREAU, RUSSELL M. Observations of Infrared Emission Lines and Radio Continuum Emission from Pre-Main-Sequence Objects. Neal J. Evans II, Russell M. Leveault, S. Beckwith, and Mike Skrutskie. *320*, 364, 112-A9 (1987)
- LIN, D. N. C. The Formation of the Exponential Disk in Spiral Galaxies. D. N. C. Lin and J. E. Pringle. *320*, L87, 121-B6 (1987)
- LINDSEY, C. LTE Modeling of Inhomogeneous Chromospheric Structure Using High-Resolution Limb Observation. C. Lindsey. *320*, 893, 119-E9 (1987)
- A Solar Chromosphere and Spicule Model Based on Far-Infrared Limb Observations. D. Braun and C. Lindsey. *320*, 898, 119-E11 (1987)
- LITTLE, BLANE. Distant Satellites as Probes of Our Galaxy's Mass Distribution. Blane Little and Scott Tremaine. *320*, 493, 114-G6 (1987)
- LONGMORE, A. J. Milliarsecond Resolution Infrared Observations of Young Stars in Taurus and Ophiuchus. M. Simon, R. R. Howell, A. J. Longmore, B. A. Wilking, D. M. Peterson, and W.-P. Chen. *320*, 344, 111-G3 (1987)
- LONSDALE, CAROL J. The IRAS Bright Galaxy Sample. II. The Sample and Luminosity Function. B. T. Soifer, D. B. Sanders, B. F. Madore, G. Neugebauer, G. E. Danielson, J. H. Elias, Carol J. Lonsdale, and W. L. Rice. *320*, 238, 110-F7 (1987)
- LUGGER, PHYLLIS M. CCD Photometry of Globular Cluster Core Structure. I. NGC 6388, NGC 6624, and M15—One Flat Core and Two Cusps. Phyllis M. Lugger, Haldan Cohn, Jonathan E. Grindlay, Charles D. Bailyn, and Paul Hertz. *320*, 482, 114-F8 (1987)
- MACCALLUM, CRAWFORD J. Prospects for Observations of Nucleosynthetic Gamma-Ray Lines and Continuum from SN 1987A. Neil Gehrels, Crawford J. MacCallum, and Marvin Leventhal. *320*, L19, 114-B10 (1987)
- MADORE, B. F. The IRAS Bright Galaxy Sample. II. The Sample and Luminosity Function. B. T. Soifer, D. B. Sanders, B. F. Madore, G. Neugebauer, G. E. Danielson, J. H. Elias, Carol J. Lonsdale, and W. L. Rice. *320*, 238, 110-F7 (1987)
- MADORE, BARRY F. Near-Infrared Observations of Cepheids: The Distance to NGC 300. Barry F. Madore, Douglas L. Welch, C. W. McAlary, and R. A. McLaren. *320*, 76, 108-C4 (1987)
- MALANEY, ROBERT A. On the Origin of the Solar System s-Process Abundances. Robert A. Malaney and Arnold I. Boothroyd. *320*, 866, 119-C7 (1987)
- MALEY, PAUL D. The Perseus Flasher and Satellite Glints. Bradley E. Schaefer, Michael Barber, John J. Brooks, Allen DeForrest, Paul D. Maley, Norman W. McLeod III, Russ McNiel, Andrew J. Noymer, A. K. Presnell, Richard Schwartz, and Scott Whitney. *320*, 398, 112-D2 (1987)
- MANZO, G. Time Variability of Gamma Cassiopeiae in X-Rays. F. Frontera, D. Dal Fiume, N. R. Robba, G. Manzo, S. Re, and E. Costa. *320*, L127, 121-D13 (1987)
- MARAN, STEPHEN P. Physical Parameters for 12 Planetary Nebulae and Their Central Stars in the Magellanic Clouds. Lawrence H. Aller, Charles D. Keyes, Stephen P. Maran, Theodore R. Gull, Andrew G. Michalitsianos, and Theodore P. Stecher. *320*, 159, 109-F12 (1987)
- MARISKA, J. T. A Numerical Study of the Nonlinear Thermal Stability of Solar Loops. J. A. Klimchuk, S. K. Antiochos, and J. T. Mariska. *320*, 409, 112-D13 (1987)
- MARTIN, ROBERT N. H₂O Maser Emission from the Nuclei of NGC 253 and M51. Paul T. P. Ho, Robert N. Martin, Christian Henkel, and Jean L. Turner. *320*, 663, 117-A12 (1987)
- MASSON, C. R. Structure of a Possible Circumbinary Disk around T Tauri. D. A. Weintraub, C. R. Masson, and B. Zuckerman. *320*, 336, 111-F9 (1987)
- A Possible Protostar near HH 7-11. E. N. Grossman, C. R. Masson, A. I. Sargent, N. Z. Scoville, S. Scott, and D. P. Woody. *320*, 356, 112-A1 (1987)
- MATEO, MARIO. CCD Photometry of Large Magellanic Cloud Clusters. IV. The Metal-rich, Remote Southern Cluster LW 79. Mario Mateo and Paul Hodge. *320*, 626, 116-D14 (1987)
- MATHEWS, G. J. The Quark-Hadron Phase Transition and Primordial Nucleosynthesis. C. A. Alcock, G. M. Fuller, and G. J. Mathews. *320*, 439, 114-C1 (1987)
- MATTHEWS, J. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Mathews. *320*, 589, 116-B3 (1987)
- MAUROGORDATO, SOPHIE. Void Probabilities in the Galaxy Distribution: Scaling and Luminosity Segregation. Sophie Maurogordato and Marc Lachieze-Rey. *320*, 13, 108-B5 (1987)
- MAZA, J. IRAS 18059 - 3211: Optically Known As Gomez's Hamburger: Erratum. M. T. Ruiz, V. Blanco, J. Maza, S. Heathcote, A. Phillips, K. Kawara, C. Anguita, M. Hamuy, and A. Gomez. *320*, L157, 121-F14 (1987) (Orig. paper in 316, L21, 56-B10)
- MCALARY, C. W. Near-Infrared Observations of Cepheids: The Distance to NGC 300. Barry F. Madore, Douglas L. Welch, C. W. McAlary, and R. A. McLaren. *320*, 76, 108-C4 (1987)
- MCLAREN, R. A. Near-Infrared Observations of Cepheids: The Distance to NGC 300. Barry F. Madore, Douglas L. Welch, C. W. McAlary, and R. A. McLaren. *320*, 76, 108-C4 (1987)
- MCLEOD, NORMAN W., III. The Perseus Flasher and Satellite Glints. Bradley E. Schaefer, Michael Barber, John J. Brooks, Allen DeForrest, Paul D. Maley, Norman W. McLeod III, Russ McNiel, Andrew J. Noymer, A. K. Presnell, Richard Schwartz, and Scott Whitney. *320*, 398, 112-D2 (1987)
- MCMILLAN, RUSSELL. The Perseus Flasher and Satellite Glints. Bradley E. Schaefer, Michael Barber, John J. Brooks, Allen DeForrest, Paul D. Maley, Norman W. McLeod III, Russ McNiel, Andrew J. Noymer, A. K. Presnell, Richard Schwartz, and Scott Whitney. *320*, 398, 112-D2 (1987)
- MCWILLIAM, ANDREW. Neutron-Exposure Variations in MS and S Stars, and the Implications for s-Process Nucleosynthesis. Verne V. Smith,

- David L. Lambert, and Andrew McWilliam. **320**, 862, 119-C3 (1987)
- MEATHERINGHAM, S. J. Angular Diameters and Fluxes of Magellanic Cloud Planetary Nebulae. II. High-Speed Direct Imaging. P. R. Wood, S. J. Meatheringham, M. A. Dopita, and D. H. Morgan. **320**, 178, 110-A11 (1987)
- MICHALITSANOS, ANDREW G. Physical Parameters for 12 Planetary Nebulae and Their Central Stars in the Magellanic Clouds. Lawrence H. Aller, Charles D. Keyes, Stephen P. Maran, Theodore R. Gull, Andrew G. Michalitsanos, and Theodore P. Stecher. **320**, 159, 109-F12 (1987)
- MIDDLEDITCH, JOHN. Rapid Optical Flaring in MXB 1735 - 444 and an Optical Burst from GX 17 + 2. James N. Inamura, Thomas Y. Steiman-Cameron, and John Middleditch. **320**, L41, 114-D3 (1987)
- MOFFAT, ANTHONY F. J. Wolf-Rayet Stars in the Andromeda Galaxy. Anthony F. J. Moffat and Michael M. Shara. **320**, 266, 111-A9 (1987)
- MOFFETT, THOMAS J. Observational Studies of Cepheids. V. Radial Velocities of Bright Cepheids (Abstract of Paper in 1987 October Suppl.). Thomas G. Barnes III, Thomas J. Moffett, and Mark H. Slovak. **320**, 937, 120-B2 (1987)
- MÖLLER, PALLE. $z_{\text{abs}} \approx z_{\text{em}}$ Absorption Systems in Quasar Spectra: A Correlation with Radio and Optical Luminosity? Palle Möller and Peter Jakobsen. **320**, L75, 121-A9 (1987)
- MORGAN, D. H. Angular Diameters and Fluxes of Magellanic Cloud Planetary Nebulae. II. High-Speed Direct Imaging. P. R. Wood, S. J. Meatheringham, M. A. Dopita, and D. H. Morgan. **320**, 178, 110-A11 (1987)
- MORRIS, M. Structural Details of the Sagittarius A Complex: Evidence for a Large-Scale Poloidal Magnetic Field in the Galactic Center Region. F. Yusef-Zadeh and M. Morris. **320**, 545, 115-D12 (1987)
- MUTEL, ROBERT L. A Study of the Ground-State Hydroxyl Maser Emission Associated with 11 Regions of Star Formation (Abstract of Paper in 1987 October Suppl.). Ralph A. Gaume and Robert L. Mutel. **320**, 36, 120-B1 (1987)
- NASSIOPOULOS, G. E. The Interstellar Medium toward Supernova 1987A. A. K. Dupree, R. P. Kirshner, G. E. Nassiopoulou, J. C. Raymond, and G. Sonneborn. **320**, 597, 116-B11 (1987)
- NASSIOPOULOS, GEORGE E. Ultraviolet Observations of SN 1987A. Robert P. Kirshner, George Sonneborn, D. Michael Crenshaw, and George E. Nassiopoulou. **320**, 602, 116-C2 (1987)
- NECKEL, TH. A New Cometary Nebula in Cygnus. Th. Neckel and H. J. Staudte. **320**, L145, 121-F1 (1987)
- NEUGEBAUER, G. The IRAS Bright Galaxy Sample. II. The Sample and Luminosity Function. B. T. Soifer, D. B. Sanders, B. F. Madore, G. Neugebauer, G. E. Danielson, J. H. Elias, Carol J. Lonsdale, and W. L. Rice. **320**, 238, 110-F7 (1987)
- NIEL, M. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig. **320**, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov. **320**, L111, 121-C13 (1987)
- NISENSEN, P. Detection of a Very Bright Source Close to the LMC Supernova SN 1987A. P. Nisenson, C. Papaliolios, M. Karovska, and R. Noyes. **320**, L15, 114-B4 (1987)
- NOMOTO, K. Collapsing White Dwarfs. E. Baron, J. Cooperstein, S. Kahana, and K. Nomoto. **320**, 304, 111-D5 (1987)
- NORDTVEDT, KEN. Probing Gravity to the Second Post-Newtonian Order and to One Part in 10^7 Using the Spin Axis of the Sun. Ken Nordtvedt. **320**, 871, 119-C12 (1987)
- NOYES, R. Detection of a Very Bright Source Close to the LMC Supernova SN 1987A. P. Nisenson, C. Papaliolios, M. Karovska, and R. Noyes. **320**, L15, 114-B4 (1987)
- NOYMER, ANDREW J. The Perseus Flasher and Satellite Glints. Bradley E. Schaefer, Michael Barber, John J. Brooks, Allen DeForrest, Paul D. Maley, Norman W. McLeod III, Russ McNiel, Andrew J. Noymer, A. K. Presnell, Richard Schwartz, and Scott Whitney. **320**, 398, 112-D2 (1987)
- ONAKA, TAKASHI. Infrared Spectrum of Quenched Carbonaceous Composite (QCC). II. A New Identification of the 7.7 and 8.6 Micron Unidentified Infrared Emission Bands. Akira Sakata, Setsuko Wada, Takashi Onaka, and Alan T. Tokunaga. **320**, L63, 114-E9 (1987)
- ORWIG, L. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig. **320**, L105, 121-C7 (1987)
- ORWIG, L. E. A New Type of Repetitive Behavior in a High-Energy Transient. J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov. **320**, L111, 121-C13 (1987)
- PAPALIOLIOS, C. Detection of a Very Bright Source Close to the LMC Supernova SN 1987A. P. Nisenson, C. Papaliolios, M. Karovska, and R. Noyes. **320**, L15, 114-B4 (1987)
- PASTORIZA, M. G. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews. **320**, 589, 116-B3 (1987)
- PERCY, JOHN R. The Nonradial Oscillations of ϵ Persei. II. Nonlinear Characteristics. Myron A. Smith, Alexander W. Fullerton, and John R. Percy. **320**, 768, 118-B10 (1987)
- PETERSON, D. M. Milliarsecond Resolution Infrared Observations of Young Stars in Taurus and Ophiuchus. M. Simon, R. Howell, A. J. Longmore, B. A. Wilking, D. M. Peterson, and W.-P. Chen. **320**, 344, 111-G3 (1987)
- PETRE, ROBERT. IRAS Observations of Supernova Remnants: A Comparison between Their Infrared and X-Ray Cooling Rates. Eli Dwek, Robert Petre, Andrew Szymkowiak, and Walter L. Rice. **320**, 27, 114-C4 (1987)
- PETROSIAN, V. Analytic and Numerical Calculations of Quantum Synchrotron Spectra from Relativistic Electron Distributions. J. J. Brainerd and V. Petrosian. **320**, 703, 117-D11 (1987)
- PHILLIPS, A. IRAS 18059 - 3211: Optically Known As Gomez's Hamburger: Erratum. M. T. Ruiz, V. Blanco, J. Maza, S. Heathcote, A. Phillips, K. Kawara, C. Anguita, M. Hamuy, and A. Gomez. **320**, L157, 121-F14 (1987) (Orig. paper in **316**, L21, 56-B10)
- PHILLIPS, M. M. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews. **320**, 589, 116-B3 (1987)
- POLLOCK, A. M. T. The Einstein View of the Wolf-Rayet Stars. A. M. T. Pollock. **320**, 283, 111-B12 (1987)
- PRESNELL, A. K. The Perseus Flasher and Satellite Glints. Bradley E. Schaefer, Michael Barber, John J. Brooks, Allen DeForrest, Paul D. Maley, Norman W. McLeod III, Russ McNiel, Andrew J. Noymer, A. K. Presnell, Richard Schwartz, and Scott Whitney. **320**, 398, 112-D2 (1987)
- PRESS, W. H. Is Solar Neutrino Capture Rate Correlated with Sunspot Number? J. N. Bahcall, G. B. Field, and W. H. Press. **320**, L69, 114-F1 (1987)
- PRINGLE, J. E. The Formation of the Exponential Disk in Spiral Galaxies. D. N. C. Lin and J. E. Pringle. **320**, L87, 121-B6 (1987)
- PRITCHET, C. J. A Search for Primeval Galaxies Using a Narrow-Band Imaging Technique. C. J. Pritchett and F. D. A. Hartwick. **320**, 464, 114-E2 (1987)
- PUETTER, R. C. The Velocity Distribution of Quasar/AGN Broad Emission Line Clouds. R. C. Puetter and E. N. Hubbard. **320**, 85, 109-A6 (1987)
- RANGACHARYULU, C. Radiative Transitions in ^{27}Al and Their Relevance to the $^{26}\text{Al}(p,\gamma)^{27}\text{Si}$ Reaction under Stellar Conditions. C. Rangacharyulu, G. Kuechler, A. Richter, and E. Spamer. **320**, 405, 112-D9 (1987)
- RATNATUNGA, KAVAN U. An Analysis of the Yale Bright Star Catalog. John N. Bahcall, Stefano Casertano, and Kavan U. Ratnatunga. **320**, 515, 115-B10 (1987)
- RAYMOND, J. C. The Interstellar Medium toward Supernova 1987A. A. K. Dupree, R. P. Kirshner, G. E. Nassiopoulou, J. C. Raymond, and G. Sonneborn. **320**, 597, 116-B11 (1987)
- RE, S. Time Variability of Gamma Cassiopeiae in X-Rays. F. Frontera, D. Dal Fiume, N. R. Robba, G. Manzo, S. Re, and E. Costa. **320**, L127, 121-D13 (1987)
- REPHAELI, Y. HEAO 1 Hard X-Ray Observations of Three Abell Clusters of Galaxies. Y. Rephaeli, D. E. Gruber, and R. E. Rothschild. **320**, 139, 109-E5 (1987)
- REYNOLDS, ANNE P. On the Distribution of Colors for Stars in the Ninth to Fifteenth Magnitude Range: Statistics and Implications for Galactic Structure. Barry M. Lasker, Peter M. Garnavich, and Anne P. Reynolds. **320**, 502, 115-A3 (1987)
- RICE, W. L. The IRAS Bright Galaxy Sample. II. The Sample and

- Luminosity Function. *B. T. Soifer, D. B. Sanders, B. F. Madore, G. Neugebauer, G. E. Danielson, J. H. Elias, Carol J. Lonsdale, and W. L. Rice.* **320**, 238, 110-F7 (1987)
- RICE, WALTER L. *IRAS* Observations of Supernova Remnants: A Comparison between Their Infrared and X-Ray Cooling Rates. *Eli Dwek, Robert Petre, Andrew Szymkowiak, and Walter L. Rice.* **320**, 27, 114-C4 (1987)
- RICHTER, A. Radiative Transitions in ^{27}Al and Their Relevance to the $^{26}\text{Al}(p,\gamma)^{27}\text{Si}$ Reaction under Stellar Conditions. *C. Rangacharyulu, G. Kuechler, A. Richter, and E. Spamer.* **320**, 405, 112-D9 (1987)
- ROBBA, N. R. Time Variability of Gamma Cassiopeiae in X-Rays. *F. Frontera, D. Dal Fiume, N. R. Robba, G. Manzo, S. Re, and E. Costa.* **320**, L127, 121-D13 (1987)
- ROMANISHIN, W. Imaging Redshift Estimates for Two BL Lacertae Objects. *W. Romanishin.* **320**, 586, 116-A14 (1987)
- ROTHSCHILD, R. E. *HEAO 1* Hard X-Ray Observations of Three Abell Clusters of Galaxies. *Y. Rephaeli, D. E. Gruber, and R. E. Rothschild.* **320**, 139, 109-E5 (1987)
- RUIZ, M. T. *IRAS* 18059 - 3211: Optically Known As Gomez's Hamburger: Erratum. *M. T. Ruiz, V. Blanco, J. Maza, S. Heathcote, A. Phillips, K. Kawara, C. Anguita, M. Hamuy, and A. Gomez.* **320**, L157, 121-F14 (1987) (Orig. paper in **316**, L21, 56-B10)
- RUSK, EDWIN T. The Poynting-Robertson Effect of a Rotating Star. *Edwin T. Rusk.* **320**, 315, 111-E2 (1987)
- SADAKANE, KOZO. The Abundance of Gallium in B-Type Chemically Peculiar Stars: Addendum. *Masahide Takada-Hidai, Kozo Sadakane, and Jun Jugaku.* **320**, 437, 112-G4 (1987) (Orig. paper in **304**, 425, 58-D14)
- SAKATA, AKIRA. Infrared Spectrum of Quenched Carbonaceous Composite (QCC). II. A New Identification of the 7.7 and 8.6 Micron Unidentified Infrared Emission Bands. *Akira Sakata, Setsuko Wada, Takashi Onaka, and Alan T. Tokunaga.* **320**, L63, 114-E9 (1987)
- SANDERS, D. B. The *IRAS* Bright Galaxy Sample. II. The Sample and Luminosity Function. *B. T. Soifer, D. B. Sanders, B. F. Madore, G. Neugebauer, G. E. Danielson, J. H. Elias, Carol J. Lonsdale, and W. L. Rice.* **320**, 238, 110-F7 (1987)
- SARAZIN, CRAIG L. Steady State Cooling Flow Models for Normal Elliptical Galaxies. *Craig L. Sarazin and Raymond E. White III.* **320**, 32, 108-C11 (1987)
- SARGENT, A. I. A Possible Protostar near HH 7-11. *E. N. Grossman, C. R. Masson, A. I. Sargent, N. Z. Scoville, S. Scott, and D. P. Woody.* **320**, 356, 112-A1 (1987)
- SCHAEFER, BRADLEY E. The Perseus Flasher and Satellite Glints. *Bradley E. Schaefer, Michael Barber, John J. Brooks, Allen DeForrest, Paul D. Maley, Norman W. McLeod III, Russ McNiel, Andrew J. Noymer, A. K. Presnell, Richard Schwartz, and Scott Whitney.* **320**, 398, 112-D2 (1987)
- SCHENGRABER, H. Deterministic Chaos in Accreting Systems: Analysis of the X-Ray Variability of Hercules X-1. *W. Voges, H. Atmanspacher, and H. Schengraber.* **320**, 794, 118-D10 (1987)
- SCHERRER, ROBERT J. Large-Scale Structure from Cosmic String Loops. I. Formation and Linear Evolution of Perturbations. *Robert J. Scherrer.* **320**, 1, 108-A7 (1987)
- SCHMELZ, J. T. The Leo Triplet Spiral Galaxy NGC 3628. II. VLA Observations of the Hydroxyl Absorption. *J. T. Schmelz, W. A. Baan, and A. D. Haschick.* **320**, 145, 109-E11 (1987)
- SCHMIDT, GARY D. The Rotationally Modulated Zeeman Spectrum at Nearly 10^9 Gauss of the White Dwarf PG 1031 + 234. *William B. Latter, Gary D. Schmidt, and Richard F. Green.* **320**, 308, 111-D9 (1987)
- SCHNEIDER, PETER. Electron Injection by Relativistic Protons in Active Galactic Nuclei. *Marek Sikora, John G. Kirk, Mitchell C. Begelman, and Peter Schneider.* **320**, L81, 121-B1 (1987)
- SCHWARTZ, P. R. Star-forming Loops in the *IRAS* Sky Images. *P. R. Schwartz.* **320**, 258, 111-A1 (1987)
- SCHWARTZ, RICHARD. The Perseus Flasher and Satellite Glints. *Bradley E. Schaefer, Michael Barber, John J. Brooks, Allen DeForrest, Paul D. Maley, Norman W. McLeod III, Russ McNiel, Andrew J. Noymer, A. K. Presnell, Richard Schwartz, and Scott Whitney.* **320**, 398, 112-D2 (1987)
- SCHWEIZER, FRANÇOIS. The Structure and Evolution of Hoag's Object. *François Schweizer, W. Kent Ford, Jr., Robert Jedrzejewski, and Riccardo Giovanelli.* **320**, 454, 114-D3 (1987)
- SCOTT, S. A Possible Protostar near HH 7-11. *E. N. Grossman, C. R. Masson, A. I. Sargent, N. Z. Scoville, S. Scott, and D. P. Woody.* **320**, 356, 112-A1 (1987)
- SCOVILLE, N. Z. A Possible Protostar near HH 7-11. *E. N. Grossman, C. R. Masson, A. I. Sargent, N. Z. Scoville, S. Scott, and D. P. Woody.* **320**, 356, 112-A1 (1987)
- SEGAL, I. E. Correction of a Study of Source Counts in the Chronometric Cosmology. *I. E. Segal.* **320**, 135, 109-E1 (1987)
- SHAPIRO, STUART L. How Big Are Supermassive Black Holes Formed from the Collapse of Dense Star Clusters? *Christopher S. Kochanek, Stuart L. Shapiro, and Saul A. Teukolsky.* **320**, 73, 108-G8 (1987)
- SHARA, MICHAEL M. Wolf-Rayet Stars in the Andromeda Galaxy. *Anthony F. J. Moffat and Michael M. Shara.* **320**, 266, 111-A9 (1987)
- SHARP, C. M. Polyoxymethylene in Comet Halley. *W. F. Huebner, D. C. Boice, and C. M. Sharp.* **320**, L149, 121-F7 (1987)
- SHIBAZAKI, N. Coherence Effects on Quasi-periodic Oscillations from Galactic X-Ray Sources. *R. F. Elsner, N. Shibazaki, and M. C. Weisskopf.* **320**, 527, 115-C8 (1987)
- SIKORA, MAREK. Electron Injection by Relativistic Protons in Active Galactic Nuclei. *Marek Sikora, John G. Kirk, Mitchell C. Begelman, and Peter Schneider.* **320**, L81, 121-B1 (1987)
- SIMON, M. Milliarsecond Resolution Infrared Observations of Young Stars in Taurus and Ophiuchus. *M. Simon, R. R. Howell, A. J. Longmore, B. A. Wilking, D. M. Peterson, and W.-P. Chen.* **320**, 344, 111-G3 (1987)
- Molecular Hydrogen Line Emission in Seyfert Galactic Nuclei. *J. Fischer, T. R. Geballe, Howard A. Smith, M. Simon, and J. W. V. Storey.* **320**, 667, 117-B2 (1987)
- SIMON, MANFRED. Antiproton Production of Propagating Cosmic Rays under Distributed Reacceleration. *Manfred Simon, U. Heinbach, and Ch. Koch.* **320**, 699, 117-D6 (1987)
- SKRUTSKIE, MIKE. Observations of Infrared Emission Lines and Radio Continuum Emission from Pre-Main-Sequence Objects. *Neal J. Evans II, Russell M. Leveault, S. Beckwith, and Mike Skrutskie.* **320**, 364, 112-A9 (1987)
- SLOVAK, MARK H. Observational Studies of Cepheids. V. Radial Velocities of Bright Cepheids (Abstract of Paper in 1987 October Suppl.). *Thomas G. Barnes III, Thomas J. Moffett, and Mark H. Slovak.* **320**, 937, 120-B2 (1987)
- SMITH, ANDREW M. Vacuum Ultraviolet Images of the Large Magellanic Cloud. *Andrew M. Smith, Robert M. Cornett, and Robert S. Hill.* **320**, 609, 116-C9 (1987)
- SMITH, HOWARD A. Molecular Hydrogen Line Emission in Seyfert Galactic Nuclei. *J. Fischer, T. R. Geballe, Howard A. Smith, M. Simon, and J. W. V. Storey.* **320**, 667, 117-B2 (1987)
- SMITH, MYRON A. The Nonradial Oscillations of ϵ Persei. II. Nonlinear Characteristics. *Myron A. Smith, Alexander W. Fullerton, and John R. Percy.* **320**, 768, 118-B10 (1987)
- SMITH, VERNE V. Neutron-Exposure Variations in MS and S Stars, and the Implications for s-Process Nucleosynthesis. *Verne V. Smith, David L. Lambert, and Andrew McWilliam.* **320**, 862, 119-C3 (1987)
- SNOW, T. P. Highly Ionized Stellar Winds in Be Stars: The Evidence for Aspect Dependence. *C. A. Grady, K. S. Bjorkman, and T. P. Snow.* **320**, 376, 112-B8 (1987)
- SOIFER, B. T. The *IRAS* Bright Galaxy Sample. II. The Sample and Luminosity Function. *B. T. Soifer, D. B. Sanders, B. F. Madore, G. Neugebauer, G. E. Danielson, J. H. Elias, Carol J. Lonsdale, and W. L. Rice.* **320**, 238, 110-F7 (1987)
- SONNEBORN, G. The Interstellar Medium toward Supernova 1987A. *A. K. Dupree, R. P. Kirshner, G. E. Nassiopoulos, J. C. Raymond, and G. Sonneborn.* **320**, 597, 116-B11 (1987)
- SONNEBORN, GEORGE. Ultraviolet Observations of SN 1987A. *Robert P. Kirshner, George Sonneborn, D. Michael Crenshaw, and George E. Nassiopoulos.* **320**, 602, 116-C2 (1987)
- SPAMER, E. Radiative Transitions in ^{27}Al and Their Relevance to the $^{26}\text{Al}(p,\gamma)^{27}\text{Si}$ Reaction under Stellar Conditions. *C. Rangacharyulu, G. Kuechler, A. Richter, and E. Spamer.* **320**, 405, 112-D9 (1987)
- STAUE, H. J. A New Cometary Nebula in Cygnus. *Th. Neckel and H. J. Staue.* **320**, L145, 121-F1 (1987)
- STAUFFER, JOHN R. Rotational Velocities of Low-Mass Stars in the Hyades. *John R. Stauffer, Lee W. Hartmann, and David W. Latham.* **320**, L51, 114-D12 (1987)
- STECHER, THEODORE P. Physical Parameters for 12 Planetary Nebulae and Their Central Stars in the Magellanic Clouds. *Lawrence H. Aller, Charles D. Keyes, Stephen P. Maran, Theodore R. Gull, Andrew G. Michalitsianos, and Theodore P. Stecher.* **320**, 159, 109-F12 (1987)
- STEIMAN-CAMERON, THOMAS Y. Rapid Optical Flaring in MXB 1735 - 444 and an Optical Burst from GX 17 + 2. *James N. Imamura, Thomas Y. Steiman-Cameron, and John Middleditch.* **320**, L41, 114-D3 (1987)
- STEIN, W. A. A Nonthermal Model for the XUV, Soft X-Ray Emission of AGN and QSOs. *T. W. Jones and W. A. Stein.* **320**, L11, 114-A4 (1987)
- STERNBERG, A. Cosmic-Ray-induced Photodestruction of Interstellar Molecules in Dense Clouds. *A. Sternberg, A. Dalgarno, and S. Lepp.* **320**, 676, 117-B11 (1987)
- STORCHI-BERGMANN, T. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. *V. M. Blanco, B. Gregory, M.*

- Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews. **320**, 589, 116-B3 (1987)
- STOREY, J. W. V. Far-Infrared Measurements of N/O in H II Regions: Evidence for Enhanced CN Process Nucleosynthesis in the Inner Galaxy. D. F. Lester, H. L. Dinerstein, M. W. Werner, D. M. Watson, R. Genzel, and J. W. V. Storey. **320**, 573, 116-A1 (1987)
- Molecular Hydrogen Line Emission in Seyfert Galactic Nuclei. J. Fischer, T. R. Geballe, Howard A. Smith, M. Simon, and J. W. V. Storey. **320**, 667, 117-B2 (1987)
- SUNTZEFF, N. B. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews. **320**, 589, 116-B3 (1987)
- SUNYAEV, R. A. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig. **320**, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov. **320**, L111, 121-C13 (1987)
- SUTIN, BRIAN. Collisional Charging of Interstellar Grains. B. T. Draine and Brian Sutin. **320**, 803, 118-E5 (1987)
- SZYMKOWIAK, ANDREW. IRAS Observations of Supernova Remnants: A Comparison between Their Infrared and X-Ray Cooling Rates. Eli Dwek, Robert Petre, Andrew Szymkowiak, and Walter L. Rice. **320**, 27, 114-C4 (1987)
- TAJIMA, T. Reconnection-driven Oscillations in Dwarf Novae Disks. T. Tajima and D. Gilden. **320**, 741, 117-G10 (1987)
- TAKADA-HIDAI, MASAHIDE. The Abundance of Gallium in B-Type Chemically Peculiar Stars: Addendum. Masahide Takada-Hidai, Kozo Sadakane, and Jun Jugaku. **320**, 437, 112-G4 (1987) (Orig. paper in **304**, 425, 58-D14)
- TEREKHOV, O. V. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig. **320**, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov. **320**, L111, 121-C13 (1987)
- TERNDROP, D. M. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews. **320**, 589, 116-B3 (1987)
- TEUKOLSKY, SAUL A. How Big Are Supermassive Black Holes Formed from the Collapse of Dense Star Clusters? Christopher S. Kochanek, Stuart L. Shapiro, and Saul A. Teukolsky. **320**, 73, 108-G8 (1987)
- THOMAS, JOHN H. The Interaction of Solar p -Modes with a Sunspot. II. Simple Theoretical Models. Toufik E. Abdelatif and John H. Thomas. **320**, 884, 119-D11 (1987)
- TOKUNAGA, ALAN T. Infrared Spectrum of Quenched Carbonaceous Composite (QCC). II. A New Identification of the 7.7 and 8.6 Micron Unidentified Infrared Emission Bands. Akira Sakata, Setsuko Wada, Takashi Onaka, and Alan T. Tokunaga. **320**, L63, 114-E9 (1987)
- TREMAINE, SCOTT. Distant Satellites as Probes of Our Galaxy's Mass Distribution. Blane Little and Scott Tremaine. **320**, 493, 114-G6 (1987)
- TRIVEDI, B. M. P. Chemical Condensation in the Outflowing Matter from the Proto-Sun and Its Application to Meteorites. B. M. P. Trivedi. **320**, 430, 112-F11 (1987)
- TURNER, JEAN L. H²O Maser Emission from the Nuclei of NGC 253 and M51. Paul T. P. Ho, Robert N. Martin, Christian Henkel, and Jean L. Turner. **320**, 663, 117-A12 (1987)
- UM, I. K. Inversion of the Zodiacal Infrared Brightness Integral. S. S. Hong and I. K. Um. **320**, 928, 120-A5 (1987)
- USOV, V. V. On Two-Stream Instability in Pulsar Magnetospheres. V. V. Usov. **320**, 333, 111-F6 (1987)
- VEDRENNE, G. Localization, Time Histories, and Energy Spectra of a New Type of Recurrent High-Energy Transient Source. J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, E. E. Fenimore, R. W. Klebesadel, J. G. Laros, A. V. Kuznetsov, R. A. Sunyaev, O. V. Terekhov, C. Kouveliotou, T. Cline, B. Dennis, U. Desai, and L. Orwig. **320**, L105, 121-C7 (1987)
- A New Type of Repetitive Behavior in a High-Energy Transient. J. G. Laros, E. E. Fenimore, R. W. Klebesadel, J.-L. Atteia, M. Boer, K. Hurley, M. Niel, G. Vedrenne, S. R. Kane, C. Kouveliotou, T. L. Cline, B. R. Dennis, U. D. Desai, L. E. Orwig, A. V. Kuznetsov, R. A. Sunyaev, and O. V. Terekhov. **320**, L111, 121-C13 (1987)
- VILHU, O. Spectroscopy of the Rapidly Rotating K Star HD 36705. O. Vilhu, B. Gustafsson, and B. Edvardsson. **320**, 850, 119-B5 (1987)
- VOGES, W. Deterministic Chaos in Accreting Systems: Analysis of the X-Ray Variability of Hercules X-1. W. Voges, H. Atmanspacher, and H. Scheingraber. **320**, 794, 118-D10 (1987)
- WADA, SETSUKO. Infrared Spectrum of Quenched Carbonaceous Composite (QCC). II. A New Identification of the 7.7 and 8.6 Micron Unidentified Infrared Emission Bands. Akira Sakata, Setsuko Wada, Takashi Onaka, and Alan T. Tokunaga. **320**, L63, 114-E9 (1987)
- WADE, R. The Broad-Line Region at the Center of the Galaxy. T. R. Geballe, R. Wade, K. Krisciunas, J. Gatley, and M. C. Bird. **320**, 562, 115-F12 (1987)
- Ionization State in and Reddening to the Center of the Galaxy. R. Wade, T. R. Geballe, K. Krisciunas, J. Gatley, and M. C. Bird. **320**, 570, 115-G7 (1987)
- WALKER, A. R. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. V. M. Blanco, B. Gregory, M. Hamuy, S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storch-Bergmann, and J. Matthews. **320**, 589, 116-B3 (1987)
- WALKER, G. A. H. Discovery of High-Degree Nonradial Oscillations in Rapidly Rotating δ Scuti Stars? G. A. H. Walker, S. Yang, and G. G. Fahlgren. **320**, L139, 121-E9 (1987)
- WAMSTEKER, W. The Fading of the Narrow-Line Region in 3C 390.3. J. Clavel and W. Wamsteker. **320**, L9, 114-A12 (1987)
- WATSON, D. M. Far-Infrared Measurements of N/O in H II Regions: Evidence for Enhanced CN Process Nucleosynthesis in the Inner Galaxy. D. F. Lester, H. L. Dinerstein, M. W. Werner, D. M. Watson, R. Genzel, and J. W. V. Storey. **320**, 573, 116-A1 (1987)
- WEBB, G. M. Energetic Particle Acceleration in Spherically Symmetric Accretion Flows and Shocks. G. M. Webb and T. J. Bogdan. **320**, 683, 117-C4 (1987)
- WEINTRAUB, D. A. Structure of a Possible Circumbinary Disk around T Tauri. D. A. Weintraub, C. R. Masson, and B. Zuckerman. **320**, 336, 111-F9 (1987)
- WEISSKOPF, M. C. Coherence Effects on Quasi-periodic Oscillations from Galactic X-Ray Sources. R. F. Elsner, N. Shibasaki, and M. C. Weisskopf. **320**, 527, 115-C8 (1987)
- WELCH, DOUGLAS L. Near-Infrared Observations of Cepheids: The Distance to NGC 300. Barry F. Madore, Douglas L. Welch, C. W. McAlary, and R. A. McLaren. **320**, 26, 108-C4 (1987)
- WERNER, M. W. Far-Infrared Measurements of N/O in H II Regions: Evidence for Enhanced CN Process Nucleosynthesis in the Inner Galaxy. D. F. Lester, H. L. Dinerstein, M. W. Werner, D. M. Watson, R. Genzel, and J. W. V. Storey. **320**, 573, 116-A1 (1987)
- WHITE, RAYMOND E., III. Steady State Cooling Flow Models for Normal Elliptical Galaxies. Craig L. Sarazin and Raymond E. White III. **320**, 32, 108-C11 (1987)
- WHITFORD, A. E. M. Giants in Baade's Window: Infrared Colors, Luminosities, and Implications for the Stellar Content of E and S0 Galaxies. Jay A. Frogel and A. E. Whitford. **320**, 199, 110-C10 (1987)
- WHITNEY, SCOTT. The Perseus Flasher and Satellite Glints. Bradley E. Schaefer, Michael Barber, John J. Brooks, Allen DeForrest, Paul D. Maley, Norman W. McLeod III, Russ McNeil, Andrew J. Noymer, A. K. Presnell, Richard Schwartz, and Scott Whitney. **320**, 398, 112-D2 (1987)
- WIDING, KENNETH G. SKYLAB XUV Observations of Densities, Thermal Structure, and Mass Motions in a Compact Flare. Kenneth G. Widing and J. W. Cook. **320**, 913, 119-F14 (1987)
- WILKING, B. A. Milliarcsecond Resolution Infrared Observations of Young Stars in Taurus and Ophiuchus. M. Simon, R. R. Howell, A. J. Longmore, B. A. Wilking, D. M. Peterson, and W.-P. Chen. **320**, 344, 111-G3 (1987)
- Water Masers Associated with Low-Mass Stars: A Survey of the Rho Ophiuchi Infrared Cluster. B. A. Wilking and M. J. Claussen. **320**, L133, 121-E4 (1987)
- WILLIAMS, R. E. Supernova 1987A in the Large Magellanic Cloud: Initial Observations at Cerro Tololo. V. M. Blanco, B. Gregory, M. Hamuy,

- S. R. Heathcote, M. M. Phillips, N. B. Suntzeff, D. M. Terndrup, A. R. Walker, R. E. Williams, M. G. Pastoriza, T. Storchi-Bergmann, and J. Matthews. **320**, 589, 116-B3 (1987)
- Supernova 1987A in the Large Magellanic Cloud: Possible *s*-Process Enhancements in the Progenitor. R. E. Williams. **320**, L117, 121-D4 (1987)
- WISE, MARK B. On the Validity of the Zel'dovich Approximation. Benjamin Grinstein and Mark B. Wise. **320**, 448, 114-C11 (1987)
- WOLSZCZAN, A. Interstellar Interferometry of the Pulsar PSR 1237 + 25. A. Wolszczan and J. M. Cordes. **320**, L35, 114-C11 (1987)
- WOOD, P. R. Angular Diameters and Fluxes of Magellanic Cloud Planetary Nebulae. II. High-Speed Direct Imaging. P. R. Wood, S. J. Meatheringham, M. A. Dopita, and D. H. Morgan. **320**, 178, 110-A11 (1987)
- WOODY, D. P. A Possible Protostar near HH 7-11. E. N. Grossman, C. R. Masson, A. I. Sargent, N. Z. Scoville, S. Scott, and D. P. Woody. **320**, 356, 112-A1 (1987)
- WRIGHT, EDWARD L. Long-Wavelength Absorption by Fractal Dust Grains. Edward L. Wright. **320**, 818, 118-F9 (1987)
- WU, F. Stability of Current-Sheet Models of Quiescent Prominences and Equatorial Disks. F. Wu. **320**, 418, 112-E8 (1987)
- YANG, S. Discovery of High-Degree Nonradial Oscillations in Rapidly Rotating δ Scuti Stars? G. A. H. Walker, S. Yang, and G. G. Fahlan. **320**, L139, 121-E9 (1987)
- YORK, D. G. The Local Interstellar Medium. VII. The Local Interstellar Wind and Interstellar Material in Front of the Nearby Star α Ophiuchi. P. C. Frisch, D. G. York, and J. R. Fowler. **320**, 842, 119-A10 (1987)
- YUSEF-ZADEH, F. Structural Details of the Sagittarius A Complex: Evidence for a Large-Scale Poloidal Magnetic Field in the Galactic Center Region. F. Yusef-Zadeh and M. Morris. **320**, 545, 115-D12 (1987)
- ZUCKERMAN, B. Structure of a Possible Circumbinary Disk around T Tauri. D. A. Weintraub, C. R. Masson, and B. Zuckerman. **320**, 336, 111-F9 (1987)